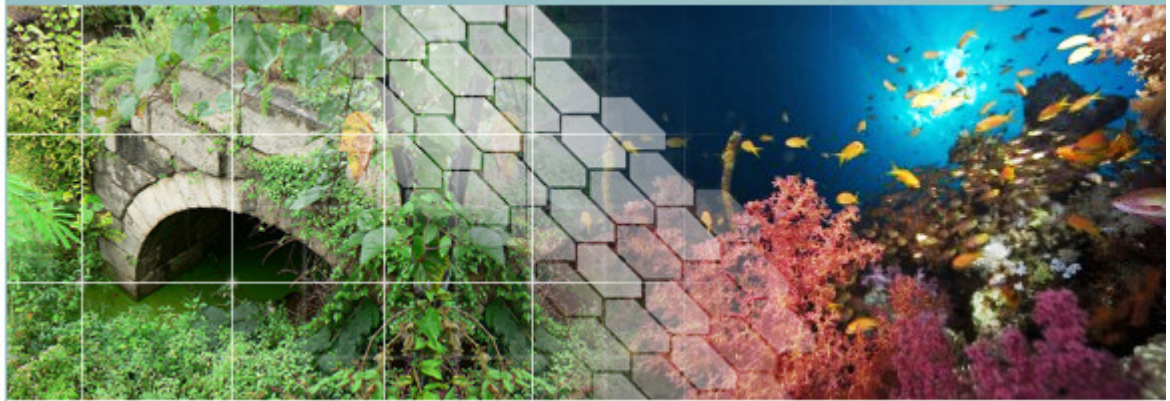


**Measures**[Mobile Source Emissions](#)[Greenhouse Gas Emissions](#)[Fuel Usage](#)[Wetlands Replacement](#)[Performance Summary](#)[Print Section](#)**Goal: Environmental Stewardship**

Protect the environment and improve the quality of life for Virginians

Grade = A

The purpose of a transportation system is to link regions and service communities and to facilitate the seamless movement of people and goods throughout the state. A major challenge for any transportation agency is to determine how to construct, maintain and operate the system without compromising natural, cultural or historic resources. The goal of environmental stewardship is to design and operate the transportation system in a manner that enhances communities, protects Virginia's natural resources, reduces pollutants and greenhouse gas emissions, and conserves energy.

Performance Measures

- Tons Per Year of Mobile Source Emissions
- Tons Per Year of Transportation Sector Greenhouse Gas Emissions
- Fuel Usage Per Capita
- Acres of Wetlands Replaced

Performance Highlights

- Mobile source emissions continue to decrease
- Transportation sector greenhouse gas emissions decreased from 2007 to 2008
- Wetlands continue to be replaced faster than they are affected by transportation construction
- Fuel usage per capita decreased

The Port of Virginia
is the first port on the east coast to be ISO 14001 certified for its environmental management system.

Strategies

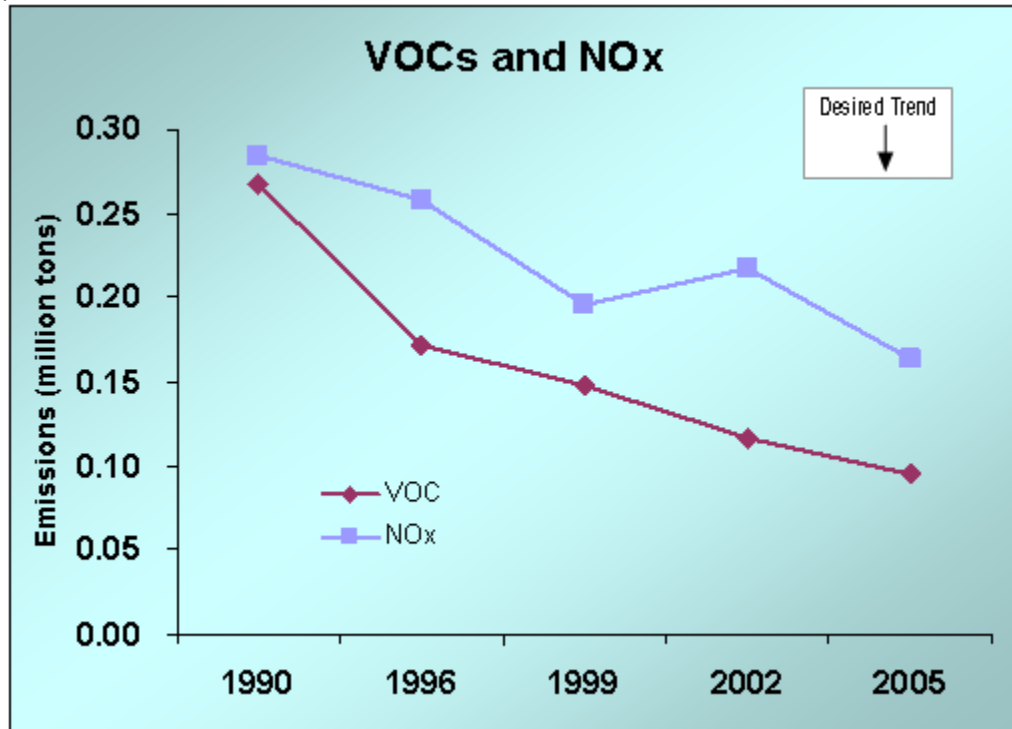
- Promote transportation demand management programs
- Continue to support emission reduction strategies at the Port of Virginia
- Develop initiatives to make and market Virginia as "hybrid friendly"
- Evaluate cost effectiveness of accelerating the electrification of truck stops and adoption of idling technology
- Expand frequency and scope of transit and rail services
- Encourage pedestrian and bicycle improvements
- Encourage local and regional land use patterns that minimize GHG emissions
- Continue to promote telework and flextime standards

Mobile Source Emissions

Since 1990, volatile organic compounds (VOC) and nitrogen oxides (NOx) emitted into the air from highway vehicles have continued to decrease due to cleaner vehicles entering the fleet each year, increased transit use, increased teleworking, and better land use planning. EPA recently implemented significantly cleaner emissions standards for passenger cars, sport-utility vehicles, and heavy diesel trucks, and also mandated the use of low sulfur gasoline and diesel.

One of the source emissions is ozone. In 2008, the number of ozone exceedance days statewide was 26, down from 46 in 2007. These are days on which the level of ozone in the atmosphere is considered unhealthy by the EPA.

The most recently published report includes actual results through 2005, and the next report is expected to be published in 2010:

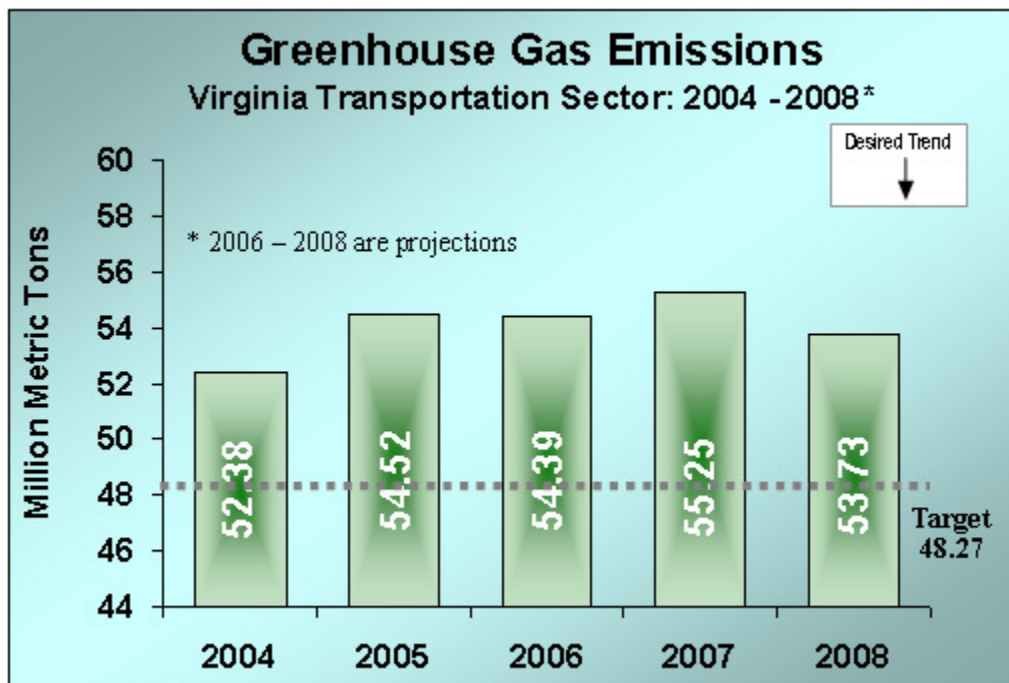


Source: Department of Environmental Quality, 2008 data unavailable as of October 1, 2009

Greenhouse Gas Emissions

Virginia's transportation sector is the largest energy-using sector in the state, accounting for approximately 42% of the total energy used in Virginia (2007). Transportation sources are estimated to have emitted 53.73 million metric tons of GHGs (CO2 equivalents) in 2008, roughly 1/3 of overall GHG emissions in the Commonwealth. Levels of GHG emissions from transportation sources are affected by the fuel efficiency of the vehicle fleet, the types of fuel used, the number of vehicle miles traveled and traffic operations.

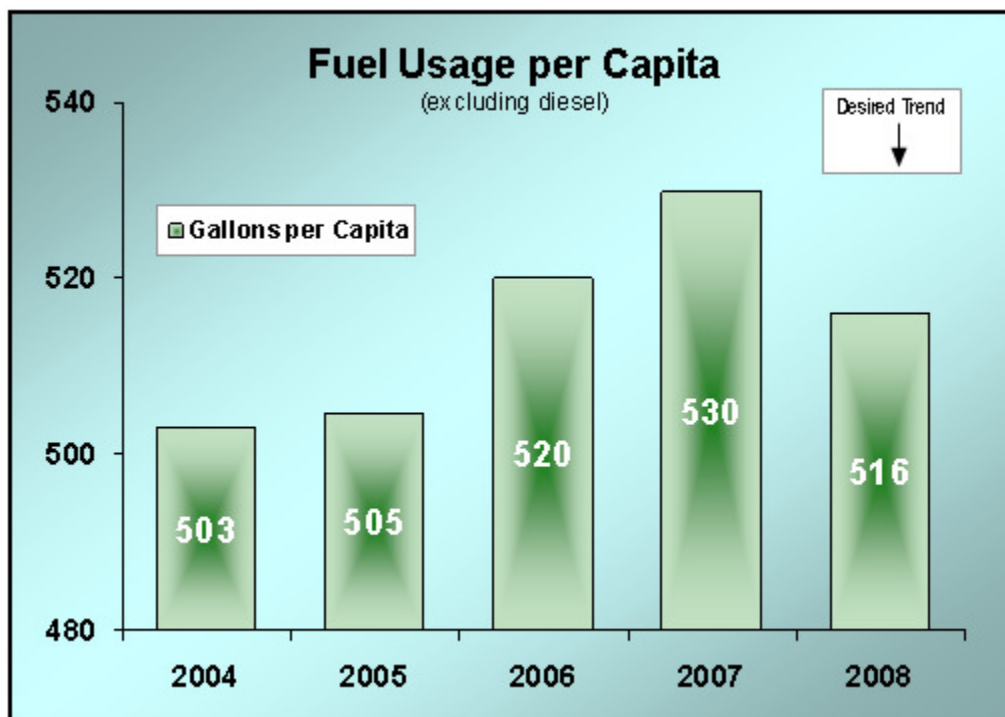
According to the Department of Environment Quality's latest estimates, GHG emissions from transportation sources are projected to increase 35% to over 78.3 metric tons by 2025, however lower fuel consumption levels in 2008 led to significantly lower GHG emissions than had been expected. Governor Kaine's Executive Order 59 (2007) set a goal of reducing GHG emissions from all sources to 2000 levels by 2025.



Source: Department of Environmental Quality – Air Division, Inventory And Projection Of Greenhouse Gas Emissions (2000 – 2025), December 2008.

Fuel Usage per Capita

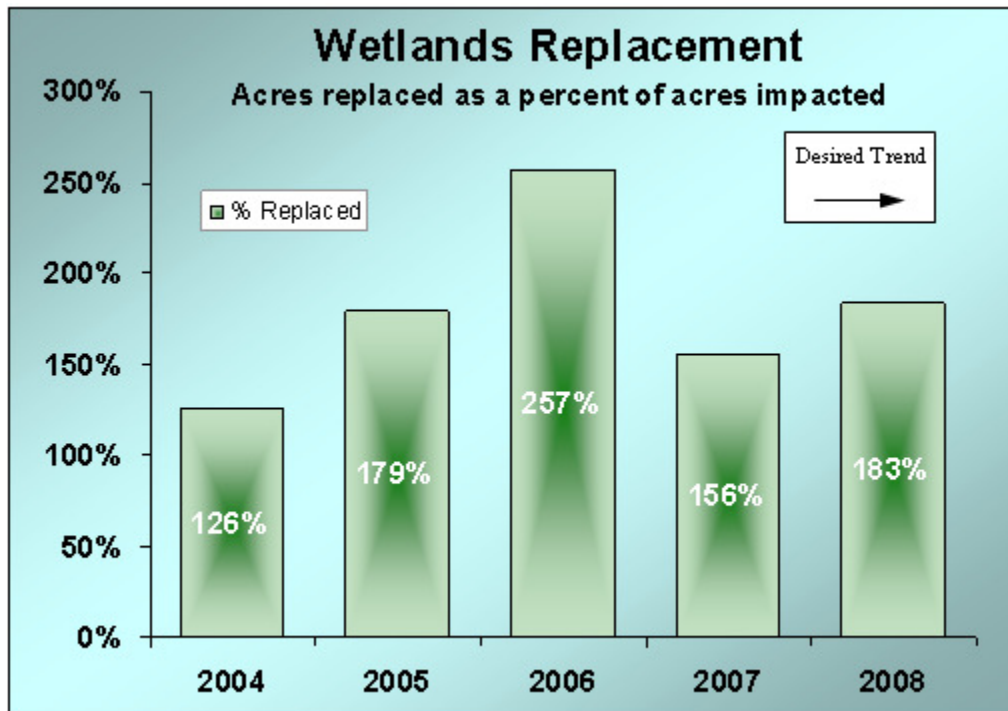
A decrease in this measure is associated with improved air quality, lower GHG emissions, and more efficient use of resources. While a decrease in fuel usage is essential to addressing the threat of climate change, it is worth noting that the fuel tax is the major revenue source supporting transportation programs. In 2008, Virginians consumed 516 gallons of fuel per capita. According to the most recent data from the U.S. Census Bureau, Virginia ranked 13th in national per capita fuel consumption rankings in 2007. Wyoming ranked first with 692 gallons per person, while New York ranked 50th at just 215 gallons.



Source: Department of Taxation, The Weldon Cooper Center

Wetlands Replacement

Historically, Virginia has overcompensated in replacing wetlands lost to roadway construction. In 2008, Virginia restored 83% more wetlands than were impacted. In general, from 2004 through 2008, Virginia replaced 75% more acres of wetlands each year than were impacted. The desired ratio is to be greater than 1:11.



Source: Department of Transportation – Environmental Division

Performance Summary

Grade = A

Performance Measure	Desired Trend	Performance Trend
Mobile Source Emissions	↓	↓
Greenhouse Gas Emissions	↓	↓
Fuels Usage per Capita	↓	↓
Acres of Wetlands Replaced	→	→